Appendix

1. (Unchanged) A method for optimizing a computer program comprising a child procedure and a parent procedure, wherein the parent procedure comprises at least one statement that invokes the child procedure, wherein the method comprises:

saving site register-pressure data from the execution of a first compilation; and

making at least one inlining decision using the site register-pressure data during a second compilation.

2. (Unchanged) The method of claim 1, further comprising:

saving a maximum register-pressure occurring in each procedure in the computer program; and

making the at least one inlining decision using the maximum register-pressure data.

3. (Unchanged) The method of claim 2, wherein the site register-pressure data comprises:

a register pressure at each call site in the computer program that is a potential inlining candidate.

4. (Unchanged) The method of claim 1, wherein the making step further comprises:

inlining the child procedure of the computer program into the parent procedure, in place of the statement that invokes the child procedure.

5. (Amended) [The method of claim 3, wherein the making step further comprises:] A method for optimizing a computer program comprising a child procedure and a parent procedure, wherein the parent procedure comprises at least one statement that invokes the child procedure, wherein the method comprises:

saving site register-pressure data from the execution of a first compilation, wherein the

site register pressure data comprises a register pressure at each call site in the computer program that is a potential inlining candidate; and

making at least one inlining decision using the site register-pressure data during a second compilation, wherein when deciding whether to inline the child procedure into the parent procedure, determining whether a sum of the maximum register-pressure and the site register-pressure exceeds a number of available registers.

6. (Unchanged) The method of claim 5, further comprising:

when the determining step is true, refraining from inlining the child procedure into the parent procedure.

7. (Unchanged) The method of claim 5, further comprising:

when the determining step is false, inlining the child procedure into the parent procedure in place of the statement that invokes the child procedure.

8. (Unchanged) The method of claim 7, further comprising:

setting the maximum register-pressure of the parent procedure to be a maximum of its existing value or the sum of the maximum register-pressure of the child procedure and the site register-pressure.

9. (Unchanged) A computer system for compiling a computer program including a child procedure and a parent procedure which includes one or more statements that invoke the child procedure, into a machine-readable representation, the computer system comprising:

an optimizer that optimizes the computer program into an optimized representation, the optimizer saving site register-pressure data from the execution of a first compilation, and making at least one inlining decision using the site register-pressure

data during a second compilation; and

a machine-readable code generator that generates a machine-readable representation of the computer procedure from the optimized representation.

10. (Unchanged) The computer system of claim 9, wherein the optimizer further:

saves a maximum register-pressure occurring in each procedure in the computer program; and

makes the at least one inlining decision using the maximum register pressure data.

11. (Unchanged) The computer system of claim 10, wherein the site register-pressure data comprises:

a register pressure at each call site in the computer program that is a potential inlining candidate.

12. (Unchanged) The computer system of claim 9, wherein the optimizer further comprises:

inlining the child procedure of the computer program into the parent procedure, in place of the statement that invokes the child procedure.

13. (Amended) A computer system for compiling a computer program including a child procedure and a parent procedure which includes one or more statements that invoke the child procedure, into a machine-readable representation, the computer system comprising:

an optimizer that optimizes the computer program into an optimized representation, the optimizer saving site register-pressure data from the execution of a first compilation, and making at least one inlining decision using the site register-pressure data during a second compilation;

wherein the site register-pressure data comprises a register pressure at each call site in the computer program that is a potential inlining candidate; and

[The computer system of claim 11, wherein the optimizer further comprises:] wherein, when deciding whether to inline the child procedure into the parent procedure, the optimizer determines [determining] whether a sum of the maximum register-pressure and the site register-pressure exceeds a number of available registers; and

a machine-readable code generator that generates a machine-readable representation of the computer procedure from the optimized representation.

14. (Unchanged) The computer system of claim 13, wherein the optimizer further comprises:

when the determining step is true, refraining from inlining the child procedure into the parent procedure.

15. (Unchanged) The computer system of claim 13, wherein the optimizer further comprises:

when the determining step is false, inlining the child procedure into the parent procedure in place of the statement that invokes the child procedure.

16. (Unchanged) The computer system of claim 15, wherein the optimizer further comprises:

setting the maximum register-pressure of the parent procedure to be a maximum of its existing value or the sum of the maximum register-pressure of the child procedure and the site register-pressure.

17. (Unchanged) A program product for optimizing a computer program that includes a

child procedure and a parent procedure that comprises at least one statement that invokes the child procedure, comprising:

an optimizer that saves site register-pressure data from the execution of a first compilation, and

makes at least one inlining decision using the site register-pressure data during a second compilation; and

signal-bearing media bearing the optimizer.

18. (Unchanged) The program product of claim 17, wherein the optimizer further:

saves a maximum register-pressure occurring in each procedure in the computer program; and

makes the at least one inlining decision using the maximum register-pressure data.

19. (Unchanged) The program product of claim 18, wherein the site register-pressure data comprises:

a register pressure at each call site in the computer program that is a potential inlining candidate.

20. (Unchanged) The program product of claim 17, wherein the optimizer further:

inlines the child procedure of the computer program into the parent procedure, in place of the statement that invokes the child procedure.

21. (Amended) A program product for optimizing a computer program that includes a child procedure and a parent procedure that comprises at least one statement that invokes the child procedure, comprising:

an optimizer that saves site register-pressure data from the execution of a first

compilation, and makes at least one inlining decision using the site register-pressure data during a second compilation;

wherein the site register-pressure data comprises a register pressure at each call site in the computer program that is a potential inlining candidate; and

wherein, [The program product of claim 19, wherein the optimizer further:] when deciding whether to inline the child procedure into the parent procedure, the optimizer determines whether a sum of the maximum register-pressure and the site register-pressure exceeds a number of available registers; and

signal-bearing media bearing the optimizer.

22. (Unchanged) The program product of claim 21, wherein the optimizer further:

when the determining step is true, refrains from inlining the child procedure into the parent procedure.

23. (Unchanged) The program product of claim 21, wherein the optimizer further:

when the determining step is false, inlines the child procedure into the parent procedure in place of the statement that invokes the child procedure.

24. (Unchanged) The program product of claim 23, wherein the optimizer further:

sets the maximum register-pressure of the parent procedure to be a maximum of its existing value or the sum of the maximum register-pressure of the child procedure and the site register-pressure.